



King County

Department of
Natural Resources and Parks



ENVIRONMENTAL STEWARDSHIP *in King County*

*Department of
Natural Resources and Parks*

2016 ANNUAL REPORT

KING COUNTY DEPARTMENT OF NATURAL RESOURCES AND PARKS



VISION

Sustainable and livable communities and a clean and healthy natural environment that support a prosperous and resilient economy.

MISSION

Provide regional parks and trails, protect the region's water, air, land, natural habitats and historic properties, and reduce, safely dispose of and create resources from wastewater and solid waste.

GOALS

ENVIRONMENT

Minimize waste and emissions, maximize resource re-use and recovery, foster environmental stewardship, promote conservation, and protect and restore habitats, ecological functions and aquatic conditions.

PEOPLE AND COMMUNITIES

Protect and improve human health and safety, foster community-building and healthy living, and preserve and enhance historic properties.

FISCAL RESPONSIBILITY AND ECONOMIC VITALITY

Support King County's prosperity and ensure ratepayer value through effective, efficient and equitable programs.

QUALITY WORKFORCE

Develop and empower our most valuable asset — our employees; build internal capacity for excellence, equity and fairness in service delivery.



ENVIRONMENTAL STEWARDSHIP IN KING COUNTY

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2016 KING COUNTY, WA



Features

2,131
square
miles

population
1,931,249

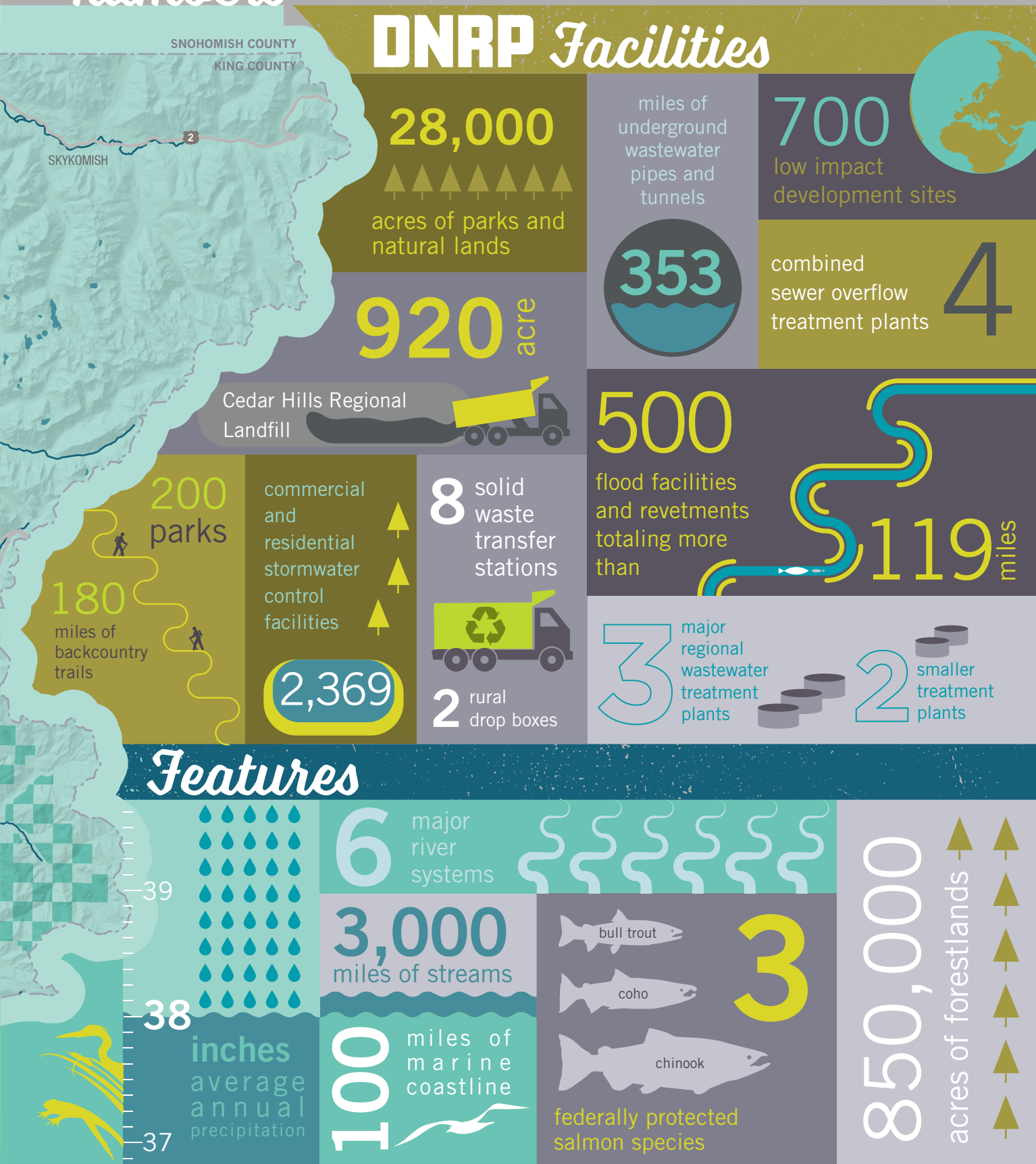
14th
lakes and
reservoirs

most populated county
in the United States
(out of 3,033)

760

975
wet-
lands

by the numbers





From the Executive

Thank you for spending some time to learn more about the work that King County Department of Natural Resources and Parks employees do to enhance and preserve our environment.

In this report, you can see examples of how DNRP supports my administration's four main policy priorities:

- Responding aggressively to climate change through sound policies and effective actions;
- Providing equitable and fair service delivery to all communities through innovation and a commitment to our shared success;



From the Director

The King County Department of Natural Resources and Parks strengthened its commitment to environmental stewardship and outstanding customer service in 2016. Here are some examples of the work we accomplished:

Puget Sound, Lake Washington and the Duwamish River.

Partnering with the King County Flood Control District and the Department of Permitting and Environmental Review, we updated old landslide hazard maps and held workshops to provide the public with more accurate information about landslide risks.

The Historic Preservation Program revived its “Barn Again” effort to save historic barns and agricultural structures and keep many of them in agricultural use. The first of two competitive grant rounds began in spring 2016, with up to \$250,000 in funding available for qualifying projects.

Led primarily by the Parks and Recreation, and Water and Land Resources divisions, King County launched the One Million Trees initiative to reach a countywide tree-planting goal by 2020. This effort will combat carbon pollution and improve neighborhoods.

We became the first King County agency to make its operations carbon neutral, achieving Executive Constantine's goal a year ahead of schedule. All DNRP divisions contributed as we increased energy-conservation and renewable energy efforts.

We launched SoundGuardian – our state-of-the-art research vessel – which will be used by scientists to collect samples and respond to emergencies in



- Improving mobility across our county – including important improvements to our exceptional regional trail system; and
- Operating the best-run government, through efficient, responsive and cost-effective service delivery.

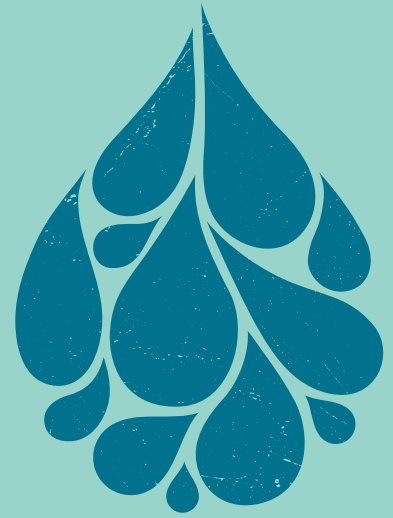
The commitment to sound environmental stewardship that I see every day from DNRP

employees serves as a strong reminder that our tremendous quality of life is not something that we can take for granted.

I want to thank DNRP's employees for their ongoing efforts to ensure King County continues to be a special place to work, live, and play.



Dow Constantine
King County Executive



Executive Constantine pulled the ceremonial first railroad spike from the County's portion of the Eastside Rail Corridor in January, and in July King County Parks presented a final regional trail plan. Later, the Executive was joined by Governor Inslee to announce \$10 million in funding to convert the Wilburton Trestle into an iconic trail section.

The Wastewater Treatment Division (WTD) celebrated the 50th anniversary of West Point Treatment Plant, and honored the men and women who have committed their careers, skills, talents, and creativity to the regional wastewater treatment system that benefits our waterways.

Work toward the King County Local Food Initiative included developing Farm King County to connect farmers to services, information, and technical resources that make it easier to farm and grow farm businesses. Parks hosted the second-annual local food and sustainable living festival, CHOMP!.

With a personal flotation device firmly secured around her furry torso, Marta the River Otter went on a water-safety roadshow, visiting with hundreds of young King County students about the importance of wearing a lifejacket around open water.

Executive Constantine launched a plan to preserve unprotected high conservation value open space in King County. A work plan was submitted to the County Council, and an advisory group was formed to help create a long-term strategy for the work.

Our Solid Waste Division (SWD) celebrated 50 years of waste disposal, waste prevention and resource recovery service and leadership for the Cedar Hills Regional Landfill. Public tours and an open house were offered to commemorate Cedar Hills' Golden Anniversary.

While finishing touches remain, the new Factoria Transfer Station opened this fall. Offering easy-to-use unloading areas and a design that allows more

recyclables to be recovered, the facility features compactors to increase load efficiency and reduce transfer trailer truck trips.

Examples of innovative engagement with diverse communities include a Georgetown Green Wall air quality project supported by a WTD grant; the "Cine en el Parque" Spanish language outdoor movie night at Steve Cox Memorial Park; WLRD's Noxious Weed Program reaching out to gardening and landscaping workers through Spanish-language materials and workshops; and SWD-sponsored open mic poetry readings.

I want to thank you again for your great work in 2016 – and I look forward to achieving more successes in 2017 and beyond!



Christie True
Director

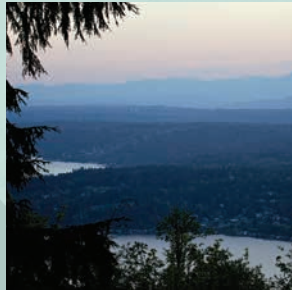
STRATEGIC INITIATIVES

in the Director's Office

DNRP Director's Office employees help develop strategies for executive initiatives that cross department and division boundaries. Here are highlights of the work accomplished in 2016:

Land Conservation Initiative

Executive Constantine launched an initiative to preserve the county's last remaining high conservation value open spaces, working resource lands and trail corridors. DNRP Director's Office, WLRD and Parks developed a land conservation and preservation work plan for the County Council in March, and assembled an advisory group to help refine the County's strategy for saving green spaces, working resource lands and other unprotected lands of high conservation value.



Green/Duwamish Initiative

This King County-Seattle partnership coordinates the work of local, state, and federal agencies for land conservation, water and air quality, and public health in the Green-Duwamish Watershed. Work in 2016 included facilitating a series of three well-attended workshops that produced a watershed-wide stormwater strategy.



Climate change

DNRP became King County's first agency to make its operations and purchases carbon neutral. DNRP will continue smart investments in operations and infrastructure to reduce more greenhouse gas emissions than it generates. The King County-Cities Climate Collaboration group continued to find success in reducing regional emissions and creating clean-energy jobs.



Kokanee recovery

The partnership between King County, state, federal, local and tribal governments, non-government organizations and residents to restore native Lake Sammamish kokanee salmon had a successful year. DNRP employees advanced habitat restoration and public outreach projects, including engaging an increasingly diverse watershed community in the stewardship effort. King County and its partners also began testing new "mini-hatchery" technology to possibly accelerate kokanee recovery.



Energy planning

Renewable energy production at the Cedar Hills Regional Landfill and the South and West Point wastewater treatment plants helped the County exceed its goal of producing renewable energy equal to 100 percent of its energy requirements, excluding the public transit fleet. In support of meeting the next 5 percent energy reduction goal by 2020, DNRP will replace all facility lighting with high efficiency LED lights by the end of 2018.



Performance management

DNRP uses performance information to seek guidance from stakeholders and elected leaders, target resource use, clarify direction for employees, and improve overall service delivery. Improvements in DNRP performance systems are focused on implementing the King County Strategic Plan and delivering work program expectations.



Local Food Economy

After helping launch Executive Constantine's Local Food Initiative in 2014, Director's Office employees helped the Kitchen Cabinet produce a report establishing goals, targets and a work plan. Work in 2016 included returning historic Snoqualmie Valley farmland to active farming, and hosting CHOMP!, a local food festival highlighting food produced in King County.



Historic Preservation

King County's Historic Preservation Program revived its Barn Again program, with \$500,000 in grant funding available for qualified projects through 2017. Six barns, three milk houses, one milking parlor, and one chicken house received grants. John D. Spellman Awards for historic preservation were given to four recipients, and two recipients were presented certificates of designation.



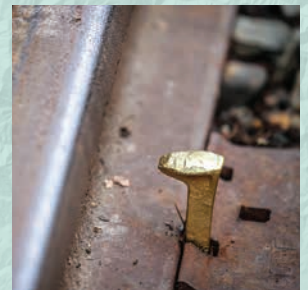
Community Service Areas (CSAs)

The CSA Program worked to engage and improve communication with unincorporated King County residents, providing 41 CSA grants totaling \$60,000. Grants offer residents the chance to participate in their communities. Nearly 500 residents participated in nine CSA Town Hall meetings where they were able to ask King County officials about key issues, local services, and resources.



Eastside Rail Corridor

Work moved from planning to developing the Eastside Rail Corridor (ERC) into a multipurpose trail. Executive Constantine pulled the ceremonial first railroad spike from the County's 16.7-mile portion of the ERC. Parks completed a draft master plan and Environmental Impact Statement for the ERC Regional Trail. The Executive was joined by Governor Inslee and others to announce \$10 million in proposed funding to convert the Wilburton Trestle into an iconic section of a new ERC Trail.



2016 AWARDS

INTERNATIONAL

Wastewater Treatment Division

Utility of the Future Today
Water Resources Utility of the Future Program

NATIONAL

Brightwater Treatment Plant Wastewater Treatment Division

Peak Performance Award – Gold
National Association of Clean Water Agencies

Carnation Treatment Plant Wastewater Treatment Division

Peak Performance Award – Gold
National Association of Clean Water Agencies

Design of Habitat – Sensitive Erosion Hazard Mitigation Near a Bridge Water and Land Resources Division and Seattle University

2016 Engineering Award
National Council of Examiners for Engineering and Surveying

Don't Drip and Drive Campaign Water and Land Resources Division, Stormwater Services Section and Pierce County

2016 National Environmental
Achievement Award
National Association of Clean Water Agencies

King County – Cities Climate Collaboration Department of Natural Resources and Parks, Director's Office

Climate Leadership Award –
Innovative Partnerships Certificate
United States Environmental Protection Agency

South Treatment Plant Wastewater Treatment Division

Peak Performance Award – Platinum
National Association of Clean Water Agencies

Vashon Treatment Plant Wastewater Treatment Division

Peak Performance Award – Platinum
National Association of Clean Water Agencies

West Point Treatment Plant Wastewater Treatment Division

Peak Performance Award – Platinum
National Association of Clean Water Agencies

STATE

Brightwater Treatment Plant – Reclaimed/Recycled Water Wastewater Treatment Division

Outstanding Wastewater Treatment
Plant Award
Washington State Department of Ecology

King County GreenTools Solid Waste Division, Recycling and Environmental Services

Northwest Solar Communities –
Governor's Award
Northwest SEED

REGIONAL

Green the Green Video Water and Land Resources Division, Water Resources Inventory Area 9

2016 River Restoration
Northwest Stories of our Watersheds Film Event

King County GreenTools Solid Waste Division, Recycling and Environmental Services Section

Salmon Hero Award
Pacific Rivers Council Salmon Safe Program

Loop® Biosolids Wastewater Treatment Division

2016 Outstanding Educational
Display
Northwest Flower and Garden Show



LOCAL

Algona Transfer Station Solid Waste Division, Facility Engineering and Science Unit

Commitment to Compliance –
Gold Award
King County Industrial Waste Program

Bow Lake Transfer Station Solid Waste Division, Facility Engineering and Science Unit

Commitment to Compliance –
Gold Award
King County Industrial Waste Program

Career Fair Booths Solid Waste Division

Indoor Exhibit – First Place
Washington Women in Trades Career Fair

Career Fair Booths Solid Waste Division

Outdoor Exhibit – First Place
Washington Women in Trades Career Fair

Career Fair Booths Solid Waste Division

People's Choice
Washington Women in Trades Career Fair

Renton Transfer Station Solid Waste Division, Facility Engineering and Science Unit

Commitment to Compliance –
Gold Award
King County Industrial Waste Program

Vashon Transfer Station Solid Waste Division, Facility Engineering and Science Unit

Commitment to Compliance –
Gold Award
King County Industrial Waste Program

EQUITY AND SOCIAL JUSTICE

in the Department of Natural Resources and Parks



In August 2016, Executive Constantine released the King County Equity and Social Justice Strategic Plan, based on extensive listening to employees, customers, ratepayers, stakeholders, and partners. DNRP now advances equity and social justice through business practice improvements that are organized by the six goal areas of this plan:

- Leadership, Operations, and Services;
- Plans, Policy, and Budgets;
- Workplace and Workforce;
- Communication and Education;
- Community Partnerships; and
- Facility and System Improvements.

In the realm of natural resources and parks, we see stark inequities in exposure to pollution, access to parks, open space, and trees, and participation in decision processes that affect the environment. At DNRP, our boards and commissions, vendors, and employees often do not reflect the increasing racial and ethnic diversity of the communities we serve.

We have significant opportunity to advance equity and social justice. In the last update to the regional trails capital budget, our Parks Division considered access to trails by race as one of the criteria in sequencing trail expansion projects.

In our recruitment, selection, and hiring process, we have made racial inclusion a priority, and are ensuring all hiring panels include people of color.

Notable equity and social justice achievements in 2016 included:

- Translating into multiple languages information on public safety, including flood risk reduction and hazards materials management;
- Continuing Spanish Movie Night at Steve Cox Memorial Park in White Center;
- Finalizing Equity and Social Justice guidelines for capital projects; and
- Advancing facility improvements, like regional trails and flood protection projects, for priority populations.

King County INVESTS...



Upstream,
where needs
are greatest,



in
**community
partnerships,**



and in
employees,

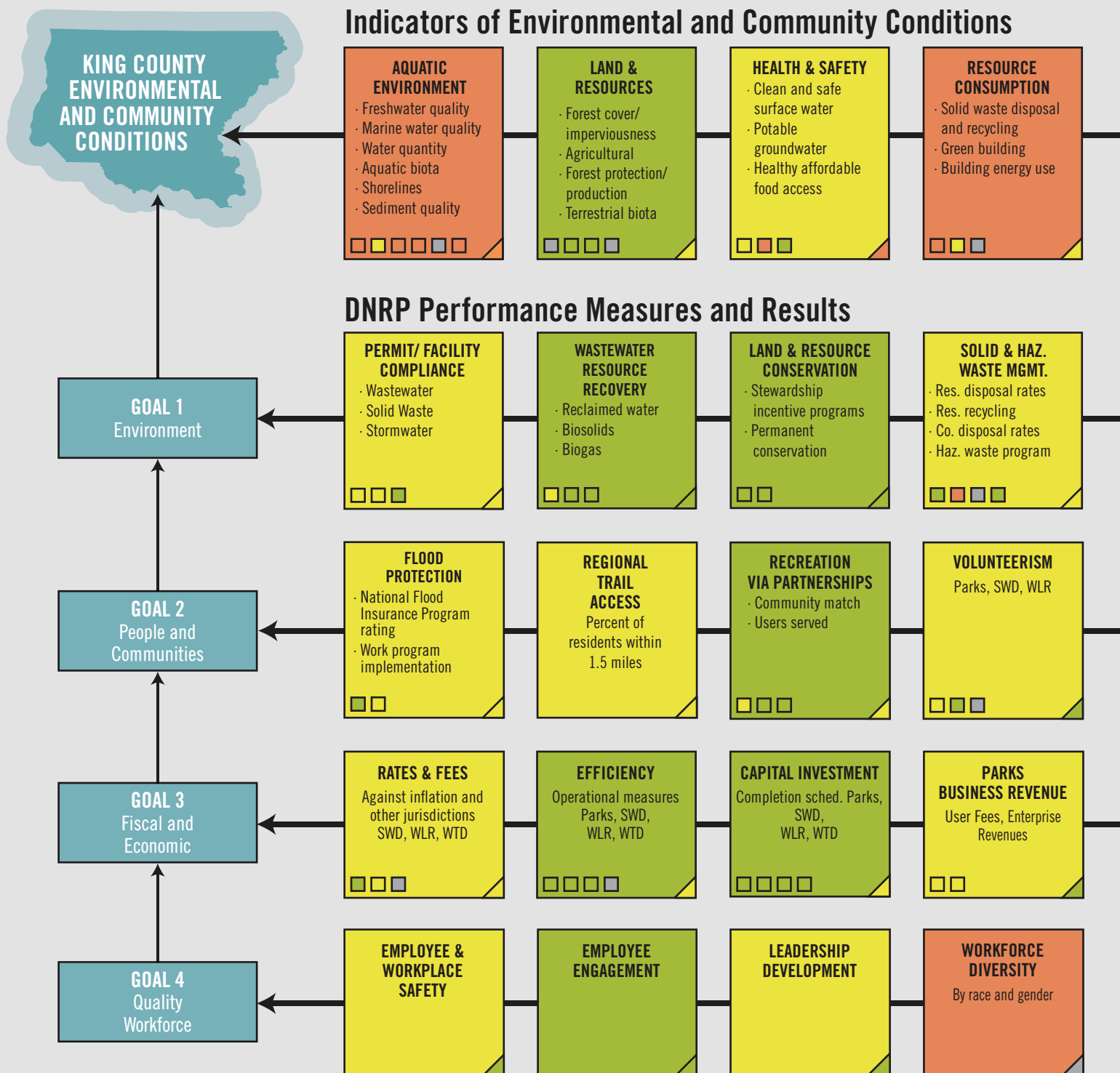


with **transparent
and accountable
leadership.**

PERFORMANCE IMPROVEMENT

The King County Department of Natural Resources and Parks has a performance-oriented culture that is supported by leadership priorities, employee values, and a long history of using performance information to:

- Strengthen our accountability to elected leaders, ratepayers, residents, and other stakeholders;
- Track program effectiveness to guide continuous improvements;
- Foster engagement with regional partners by clarifying outcomes we seek; and
- Convey organizational priorities and expectations to employees.



This is DNRP's 10th year of providing a DNRP online performance report that includes findings on environmental and community conditions in King County, and annual results for efficiencies, resources recovery, customer satisfaction, and related topics.

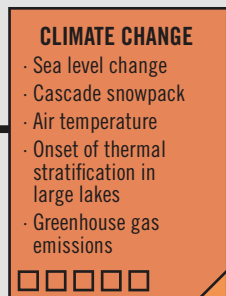
Our community scale data helps employees diagnose problem areas, guide resource allocation, and understand the degree that our actions are resulting in the improvements we intend.

In 2016, DNRP expanded and strengthened use of visual management tools to make information about organizational performance more transparent and accessible. These visual management tools are routinely deployed to guide progress at the department, division, section, and program levels.

We are investing in leadership and staff development to build competencies that improve performance and help us achieve our organizational goals of environmental quality, healthy people and communities, fiscal stewardship and a quality workforce.

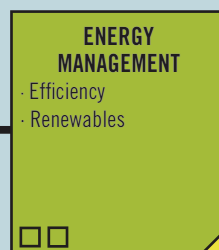
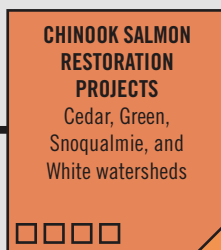
Many thanks to DNRP employees who drive performance innovations on a routine basis and to our customers and stakeholders who provide the feedback we use to improve our service.

We appreciate your help on our journey of continuous improvement.

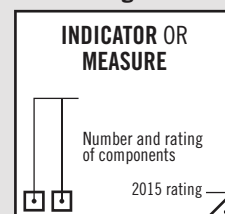


Indicators Key

- Meets or exceeds standard, goal, or improved from prior years
- Approaching standard goal, or steady with prior years
- Below standard, goal, or decline from prior years
- Insufficient data



General Legend



Please visit your.kingcounty.gov/dnrp/measures/default.aspx



Acronyms

- DOT** Department of Transportation
- FMD** Facilities Management Division
- SWD** Solid Waste Division
- WLR** Water & Land Resources Division
- WTD** Wastewater Treatment Division

Performance Measures Key

- Meets or exceeds target
- Approaches target (< 10% away from target)
- Needs improvement (>10% away from target)
- Insufficient data

PARKS AND RECREATION DIVISION

Mission

Steward, enhance and acquire parks to inspire healthy communities.

The Parks and Recreation Division stewards 200 parks, 175 miles of regional trails, and 28,000 acres of open space, including such regional treasures as Cougar Mountain Regional Wildland Park and Marymoor Park, as well as the Weyerhaeuser King County Aquatic Center. By cultivating strong relationships with non-profit, corporate and community partners, Parks provides recreational opportunities for King County residents and protects the region's public lands, leaving a legacy for future generations.



2016 Accomplishments

Open space protection and recreation

Parks protected 340 acres of fish and wildlife habitat, including expanding Mitchell Hill Connector Forest by 67 acres, and acquiring 60 acres at Frog Holler Forest, which conserves one of the last remaining blocks of contiguous and undeveloped forest on Vashon Island. Parks also implemented significant habitat restoration projects at Bass Lake, Tolt River, and Maury Island natural areas.

Furthering the Strategic Climate Action Plan goal of nurturing healthy forests, Parks has been developing stewardship plans for more than 4,000 acres of forestlands, including Mitchell Hill Connector Forest, Cougar-Squak Corridor, Grand Ridge, Soaring Eagle and elsewhere.

The division completed trailheads at Black Diamond Open Space and Taylor Mountain Forest, enhancing access to 35 miles of backcountry trails and more than 3,000 acres of public natural areas.

Regional trails

Parks' vision to connect 300 miles of regional trails to 30 cities and four counties moved forward with completion of a 1.5-mile-long segment of the Lake to Sound Trail in south King County, and launching the design phase for a portion of the Green to Cedar Rivers Trail near Maple Valley. Construction began on South Sammamish Segment A of the East Lake Sammamish Trail, with design underway on the final section of this 11-mile-long trail. The Eastside Rail Corridor received state, local and corporate support for rehabilitating the iconic Wilburton Trestle in Bellevue.

Community Partnerships and Youth Sports Facilities

The Community Partnerships and Grants Program has worked with partners to build, operate, and maintain new or enhanced public facilities that have expanded recreation opportunities for some 718,000 park and trail visitors over the last five years.



Parks partnered with Cascade Bicycle Club to construct the White Center Bicycle Playground at Dick Thurnau Memorial Park. This closed-course streetscape offers people of all ages a safe space to learn the rules of the road and hone bicycling skills.

Parks awarded \$883,950 in 2016 in Youth Sports Facilities Grants (YSFG) to 13 projects, leveraging millions of dollars in matching funds from local cities, schools and other groups. Among other projects, YSFG funded the Vashon Island Rowing Club to expand their boathouse at Jensen Point Park. King County has awarded \$15 million in grants since the program's inception in 1993, creating more than 350 new or renovated youth sports facilities throughout the county.

Parks also organized the second-annual CHOMP! local food and sustainable living community festival at Marymoor Park, and coordinated the "Fairwood 50" community anniversary at Petrovitsky Park.

Volunteers

Some 10,400 volunteers gave more than 59,000 hours of service to Parks in 2016 at 460

volunteer events. During these events, volunteers helped build backcountry trails and clear litter, plant 23,800 native trees and shrubs, and remove more than 690 cubic yards of invasive weeds to help native plants thrive.

Business Development and major events

Parks secured \$4.8 million in revenue from major events, facility rentals, corporate sponsorships and other activities to support operations and maintenance of the division's parks and trails. Signature events set attendance records and generated significant revenue for the division, including Marymoor Park Concert Series, Movies@Marymoor Outdoor Cinema, Washington Brewers Festival, Timber! Outdoor Music Festival, and Beat the Blerch marathon.

Other entrepreneurial endeavors included a successful second season for river floating and shuttle service concessionaire Fall City Floating, whose revenue increased 77 percent in 2016; and establishing six primitive campsites at Maury Island Marine Park in partnership with Vashon Watersports.

Outlook

Now in the third year of its six-year levy, Parks has received another excellent review from the Parks Levy Citizen Oversight Board. The division is focused on growing its regional trails system, expanding access to recreation opportunities in its 200 parks, and enhancing forest stewardship across its 28,000 of open space.

In 2017, the division will begin a new partnership with Tiny Trees, a non-profit organization that will offer outdoor preschool in two parks and expand to three more in 2018. Parks will also launch a new grants program, expanding YSFG, and supporting community-based organizations and other jurisdictions for capital improvements and programming for youth and amateur sports and recreation.

The division will also further explore its continuous improvement efforts, focusing on workforce recruitment and development, grants administration, and other operational efficiencies.



SOLID WASTE DIVISION

Mission

The Solid Waste Division brings the best people together to deliver value to our customers and stakeholders and continuously improve waste prevention, resource recovery, and waste disposal.



What We Do

The Solid Waste Division is a forward-thinking organization that provides environmentally responsible solid waste transfer and disposal services in King County. The division operates eight transfer stations, two rural drop boxes, and the Cedar Hills Regional Landfill – the only operational landfill in the county. Our stakeholders include residents and business owners in unincorporated King County and 37 cities throughout the county. The division works closely with stakeholders to continue our national leadership in waste prevention, resource recovery, and waste disposal.

2016 Accomplishments

Waste Prevention

The division will continue offering yard and food waste recycling service at Vashon Recycling and Transfer Station following a year-long pilot program, when customers brought 584 tons of yard and food waste separated from garbage. This service was promoted through a partnership between the division and the nonprofit Zero Waste Vashon.

At the end of 2016, 250 schools have been or are being assisted by the King County Green Schools Program. More than 165,000 students have learned about and engaged in waste reduction, recycling, and other conservation practices.

Resource Recovery

BioEnergy Washington (BEW), which contracts with the division to process landfill gas into pipeline-quality Renewable Natural Gas (RNG) for sale to Puget Sound Energy, produced more gas and generated more revenue for the division than ever before.

With improved collection operations from the division and better processing at the plant, BEW processed 21 percent more gas than in 2015. The division received \$2.3 million in revenue from gas delivered from January through October.

After successful results at the Shoreline and Enumclaw recycling and transfer stations, the division expanded its Resource Recovery Program to the Bow Lake Recycling and Transfer Station. This expansion included mechanical sorting of the targeted materials – cardboard, clean wood, and scrap metal – on the tipping floor.

Resource recovery resulted in 5,816 additional tons of cardboard, clean wood, and scrap metal recovered in 2016.



Waste Disposal

Compared to 2015, total tonnage in 2016 grew by 6 percent, about 52,200 tons, to 922,003 total tons of garbage disposed at transfer stations and Cedar Hills Regional Landfill.

The division celebrated 50 years of operations at the landfill, commemorating the event by inviting the public to tour the landfill and see operations firsthand. More than 100 people attended the event, including Deputy Executive Fred Jarrett, who noted the importance of the landfill and its contribution to the County's efforts to combat climate change.

In mid-May, the division opened a new Factoria Transfer building in Bellevue to replace the 1960s-era facility. The new building uses a flat floor design where customers unload garbage directly onto the tipping floor

instead of into trailers. This allows for more efficient traffic flow and flexibility in waste collection and processing. After six months of operation, newly-installed garbage compactors resulted in 500 fewer truck trips from Factoria to the landfill.

The division worked with the King County Sheriff's Office on a new ammunition disposal service. The Sheriff's Office collects one ton of ammunition annually that used to be destroyed via burn trailers, exposing deputies to unhealthy fumes and creating environmental issues from emissions and ash. Now ammunition goes to a facility for dismantling and recycling. The Sheriff's Office provides collection, secure storage, and pick up locations. The disposal is funded by the Local Hazardous Waste Management Program.

2017 Outlook

By December 2017, the division will fully complete the Factoria Recycling and Transfer Station. The new facility will offer expanded household hazardous waste collection and disposal services in its own building, and extensive recycling options – including commingled recyclables, appliances, scrap metal, textiles, wood, and yard waste.

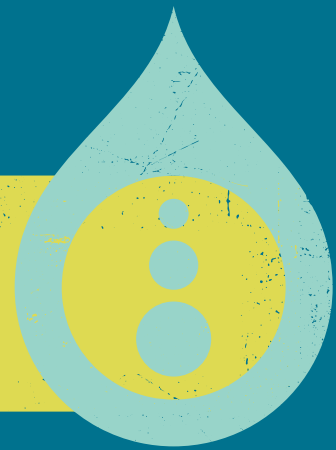
The division anticipates finishing a draft Comprehensive Solid Waste Management Plan by year's end that primarily looks out toward the next six years but also considers the next 20. After releasing a final environmental impact statement on a new South County facility in 2016, the division will finalize siting, procurement and permitting processes in 2017.



WASTEWATER TREATMENT DIVISION

Mission

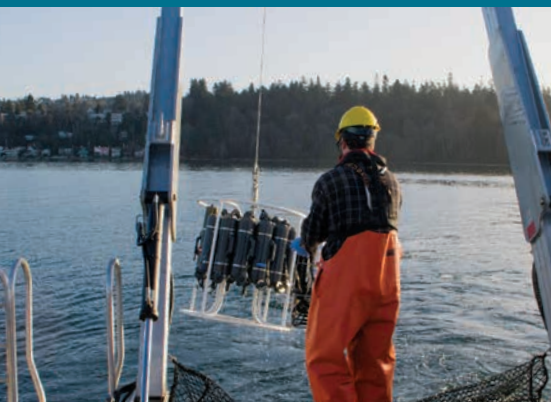
King County's Wastewater Treatment Division (WTD) protects public health and enhances the environment by collecting and treating wastewater while recycling valuable resources for the Puget Sound region.



What We Do

WTD is an innovative clean-water enterprise that protects public health and water quality by providing wholesale wastewater treatment services to 17 cities, 17 local sewer districts and more than 1.6 million residents across a 420-square-mile area in King, Snohomish and Pierce counties.

More than 650 WTD employees manage the regional system of treatment plants, pipelines and pump stations that operate around the clock. They also plan and design new facilities, regulate the disposal of industrial waste, educate the public and businesses on pollution prevention, and pursue innovation by recycling resources to support sustainable communities.



2016 Accomplishments

Plant operation

West Point Treatment Plant celebrated 50 years of service. Regional wastewater treatment has cut pollution to the Duwamish River, and transformed Lake Washington to one of the world's cleanest urban lakes.

All five treatment plants attained 100 percent compliance in meeting state and federal effluent limits. Vashon Treatment Plant earned a platinum level award for compliance with all permit conditions over a period of five consecutive years.

Brightwater Treatment Plant earned the Department of Ecology's "Outstanding Wastewater Treatment Plant" award, which is only given to facilities achieving perfect performance in a reclaimed water process that depends on compliance from operations to its customers.

Resource recovery and recycling

Between West Point and South treatment plants, WTD produced 33,600 megawatt hours of electricity, enough to power nearly 4,000 homes.

In addition, WTD cut electricity usage by 800,000 kilowatt hours by installing programmable thermostats in six pump station HVAC systems. Once all pump stations are equipped, the division expects to reduce offsite electricity by 10 percent.

One-hundred percent of the division's Loop® biosolids were recycled for use in forestry, agriculture and commercial composting applications.

Education, outreach and community services

WTD continues to promote education about clean water systems and careers in diverse communities. The division hired 10 high school students for an internship learning about water systems,

equity and social justice, and careers in wastewater.

WTD's project team working on the Georgetown Wet Weather Treatment Facility completed a design advisory group effort.

This year marked the five-year anniversary of WTD's partnership with IslandWood that has reached almost 60,000 people through clean-water education programs.

Pollution control and cleanup

In July, King County approved 11 WaterWorks Grant Program awards to address water quality issues. The City of Kent's Leber Homestead Arsenic Remediation Project led to completion of off-channel salmon habitat and floodwater storage.

In the fall, King County participated in the "Make a Difference Day" planting event at the Georgetown Green Wall, a community driven air quality project funded by WTD's Green Grants Program.

WTD's Murray Wet Weather Storage Facility began operations in November. This facility protects Puget Sound by reducing untreated discharges of stormwater and wastewater off Lowman Beach Park in West Seattle during heavy rainstorms.

WTD led the design and contracting for exploring cleanup technology for the Lower Duwamish Waterway Group, including testing activated carbon for sequestering pollutants.



WTD celebrated the men and women who have dedicated their careers to clean water service.

Finance and administration

Excellent credit ratings and continued favorable financial market conditions combined to benefit ratepayers served by WTD. King County sold \$500 million of sewer revenue bonds in September, essentially re-financing its debt to save \$104 million over the next 33 years.

WTD maintained a strong sewer revenue bond rating with sound management practices and consistent financial performance.

WTD received recognition by the "Utility of the Future-Today Joint Recognition Program," which is supported by the U.S. Environmental Protection Agency. WTD was one of 61 recipients recognized nationally for optimizing operations, meeting or exceeding regulatory requirements, and engaging employees and communities.

Capital projects

The division invested about \$207 million in capital improvement projects to add system capacity, replace or

rehabilitate aging facilities, and enable efficient operations.

The Fremont Siphon Replacement Project was completed and includes two new pipelines tunneled under the Lake Washington Ship Canal to replace World War I-era pipes.

The RainWise partnership between King County and the City of Seattle marked the 1,000th installation of green stormwater features on private property that will reduce annual stormwater runoff by up to 16 million gallons.

Outlook

The division will maintain its commitment to service excellence by increasing efficiency through Lean and continuous improvement; meeting or surpassing permit requirements; exploring new technologies and markets for its recycled products; restoring the West Point Treatment Plant; and investing in its asset management and capital improvement programs.

WATER AND LAND RESOURCES DIVISION

Mission

To protect the water and land resources in King County for everyone to enjoy safely today, tomorrow, and for our future.

What We Do

The goal of every Water and Land Resources Division (WLRD) employee is to protect the health and integrity of King County's natural resources. We work to reduce flood risks, monitor water quality and restore wildlife habitat. We manage, and reduce the harmful impacts from, stormwater, noxious weeds and

hazardous waste. We create sustainable forestry and agriculture, and protect open space.

The division houses a variety of programs with regional significance. The Environmental Lab and Science Section provides environmental monitoring, and data management, analysis and modeling services. The Local Hazardous Waste Management Program of King County ensures residents and business safely dispose of hazardous waste.

The River and Floodplain Management Section is the service provider to the King County Flood Control District (FCD), and implements the County's flood management plan. Lastly, WLRD is home to regional salmon recovery programs working to prevent the extinction of endangered salmon.



2016

Accomplishments

Stormwater Services

The Stormwater team inspected 4,500 public and private stormwater facilities to identify and address illegal stormwater discharge; pollution from businesses; and maintenance and repair needs. Fifteen stormwater projects were completed, two of which were emergency responses to address potential flooding.

Through the Agricultural Drainage Assistance Program, 13,200 linear feet of farm ditches were cleared, making the land productive again. This supports the County's goals of increasing locally grown food while protecting fish habitat.

Rural and Regional Services

Farm King County, a website supporting farm operations, was launched as part of King County's Local Food Initiative. In addition, 271 acres of farmland were brought into production and 10 Snoqualmie Valley farms received irrigation water.



Regional partnerships and ecological restoration accomplishments included:

- Marking a decade of salmon recovery work and partnerships – including the popular salmon-watching program, “Salmon SEEs on” – and starting plans for the next decade.
- Acquiring 43 acres of prime fish and wildlife habitat in the Green River watershed.
- Completing the Mill Creek restoration project and securing \$5.4 million in funding needed to complete the Porter Levee Setback and Floodplain Restoration Project.
- Completing the Duwamish Gardens estuary restoration project.
- Planting more than 60,000 native trees and shrubs at Bass Lake, Whitney Bridge Park, and Newaukum Creek.
- Preserving more than 1,000 feet of marine shoreline on Vashon-Maury Island.
- Coordinating completion of the Sammamish River side channel restoration project for migrating salmon.
- The Local Hazardous Waste Management Program provided assistance and financial incentives to more than 1,000 business customers and 3,500 residents, and the Safer Cleaning Practices, Lead Safe Homes, and Safer Auto Paints community projects.



- The Noxious Weed Program responded to 1,200 community inquiries and infestation reports and worked with 4,000 landowners to control 10,800 noxious weed infestations. More than 10,000 residents attended workshops and presentations.

River and Floodplain Management

On behalf of the FCD, these flood risk reduction and technical projects were done to protect public safety:

- The Sinnema Quaaale Upper Revetment Analysis and Repair Project was completed along the Snoqualmie River, repairing damage from previous floods and reducing erosion risk to State Route 203 and protecting the Snoqualmie Valley Trail.
- The two-year Countyline Levee Setback Project broke ground on the White River to reconnect over 120 acres of floodplain and reduce the risk of flooding for 200 homes and property.

Science and Environmental Lab

The Science Section completed work on major projects to support regional wastewater

and stormwater management, fisheries and habitat restoration, and other King County programs to improve environmental quality.

Together, Science and Lab employees implemented environmental monitoring programs focused on swim beach health, fresh and marine water quality, stream flow and temperature, toxics, sediments, groundwater, fisheries and habitat, aquatic life, and more.

The Environmental Lab launched SoundGuardian, its new state-of-the-art research vessel. The lab also analyzed and reported nearly 17,000 samples for 500,000 parameters, and administered the Trouble Call Program.

Outlook

Priorities for 2017 include addressing aging stormwater drainage infrastructure in partnership with King County's Department of Transportation; creating a Shellfish Protection District to help protect water quality in support of local shellfish harvesting; proposing a Land Conservation Work Plan to the King County Executive to protect remaining open space; and updating long-term salmon recovery plans for the region.

DNRP FINANCIALS

Department of Natural Resources and Parks (DNRP) 2017/18 Biennial Budget¹

King County Executive	Operating (\$Millions)	Capital (\$Millions)	FTEs
DNRP Director ²	16.30	N/A	32.0
Wastewater Treatment	837.80	627.30	623.7
Water and Land Resources	144.40	185.60	361.9
Solid Waste	278.30	70.80	406.5
Parks and Recreation ³	97.90	99.80	224.1
Totals	1374.79	983.44	1648.2

DNRP Rate Summary

	2006 Actual	2007 Actual	2008 Actual	2009 Actual	2010 Actual	2011 Actual	2012 Actual	2013 Actual
Solid Waste Enterprise								
Rate per ton at SWD transfer stations	82.50	82.50	95.00	95.00	95.00	95.00	109.00	120.17
Change from previous year	0.0%	0.0%	15.2%	0.0%	0.0%	0.0%	14.7%	10.2%
Regional Direct Fee (\$/ton)	69.50	69.50	80.00	80.00	80.00	80.00	93.50	93.50
Change from previous year	0.0%	0.0%	15.1%	0.0%	0.0%	0.0%	16.9%	0.0%

Wastewater Treatment Enterprise

Monthly rate per household (\$/RCE)	25.60	27.95	27.95	31.90	31.90	36.10	36.10	39.79
Change from previous year	0.0%	9.2%	0.0%	14.1%	0.0%	13.2%	0.0%	10.2%

Surface Water Management Program

Monthly rate per household ⁴	8.50	9.25	9.25	9.25	9.25	11.08	11.08	12.58
Change from previous year	0.0%	8.8%	0.0%	0.0%	0.0%	19.8%	0.0%	13.5%

Notes:

¹ King County appropriates budgets on a biennial cycle, so the figures represent two years of expenditure authority, including supplemental appropriations.

² Includes budget for Historic Preservation Program (4.0 FTEs) and Community Services Area Program (4 FTEs).

³ Includes operating and YSFG expenditures.



2014 Actual	2015 Actual	2016 Actual	2017 Adopted	2018 Adopted
120.17	120.17	120.17	134.59	134.59
0.0%	0.0%	0.0%	12.0%	0.0%
93.50	93.50	93.50	114.00	114.00
0.0%	0.0%	0.0%	21.9%	0.0%
39.79	42.03	42.03	44.22	44.22
0.0%	5.6%	0.0%	5.2%	0.0%
14.29	14.29	14.29	20.04	20.04
13.6%	0.0%	0.0%	40.2%	0.0%



⁴ Billed annually with property taxes

⁵ Source: U.S. Bureau of Labor Statistics (CPI-U for Seattle MSA)

⁶ For 2017-2018, forecasted change are based on adopted OEFA March 2015 June-June Average Seattle CPI-W forecast.

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